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(71) Applicant (for all designated States except US): **VER-SAMATRIX A/S** [DK/DK]; Gamle Carlsberg Vej 10, DK-2500 Valby (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHRISTENSEN, Soeren, Flygenring** [DK/DK]; Frederiksberg Bredegade 7b, 1tv, DK-2000 Frederiksberg (DK). **JOHANNSEN, Ib** [DK/DK]; Munkevej 24, DK-3500 Værløse (DK).

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(54) Title: APPARATUS AND METHODS FOR ANALYSIS AND SORTING OF PARTICLES SUCH AS POLYMER BEADS

(57) Abstract: The present invention relates to an apparatus for analysing beads and particles, such as polymer beads used e.g. for solid phase synthesis. The apparatus in one embodiment comprises a rotatable, circular disc comprising a plurality of through-going, inlets, wherein an individual bead from a composition comprising different beads can be fixed to the disc at the end-position of a through-going inlet by applying a pressure drop over said disc comprising said through-going inlets. The pressure drop results in beads being sucked (i.e. detachably fixed) onto the disc on top of the through-going inlets. When the disc is rotated the beads are transferred from the position where they initially became attached to the disc to fixed positions wherein suitable devices for measuring and/or analyzing and/or sorting the beads can be operated in order to e.g. measure and/or analyse and/or sort at least one bead of a plurality of beads. More specifically, the invention relates to an apparatus for measuring a plurality of optically detectable beads, such as polymer beads, said apparatus comprising a) a vacuum container comprising at least one planar capture body capable or rotating around a central axis, wherein said capture body comprises a plurality of through-going inlets, and wherein the diameter of each inlet is smaller than the average diameter of the beads to be measured and/or analysed and/or sorted, b) a pressure controlling device capable of controlling the pressure in the vacuum container, c) a device for rotating the vacuum container around the axis of the capture disc, and d) a device for measuring at least one property of at least one bead.



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